

AMENDMENT TO THE CLAIMS

The following set of claims replaces all prior versions.

1. (Currently Amended) A method for reproducing coniferous somatic embryos by somatic embryogenesis comprising

growing on a nutrient medium an immature embryogenic culture derived from an explant, ~~on a~~ the nutrient medium selected from the group consisting of induction medium, maintenance medium and prematuration medium, and wherein the nutrient medium comprises comprising lactose and an additional sugar,

wherein the coniferous somatic embryos are *Pinus taeda* somatic embryos or hybrids thereof, and

wherein when the nutrient medium is the induction medium, growing the immature embryonic culture comprises inducing ~~is used to induce an~~ the explant to form an embryogenic tissue,

wherein when the nutrient medium is the maintenance medium, growing the immature embryonic culture comprises growing and maintaining ~~is used to grow and maintain the~~ embryogenic culture, and

wherein when the nutrient medium is the prematuration medium, growing the immature embryonic culture further comprises transferring ~~is used to prepare the embryogenic culture for transfer from the~~ prematuration medium to maturation medium and for subsequent development of mature embryos capable of germination, ~~wherein the coniferous somatic embryos are *Pinus taeda* somatic embryos or hybrids thereof, and wherein the maturation medium does not contain~~ containing auxin or cytokinin.

2-4. (Canceled)

5. (Currently Amended) The method of claim 1, wherein the lactose is less than 6.0 wt. % of the nutrient medium.

6. The method of claim 1, wherein the nutrient medium is gelled or liquid.

7.-12. (Canceled)

13. (Currently Amended) The method of claim 1, wherein the nutrient medium is the maintenance medium, wherein the maintenance medium comprises an auxin and a cytokinin and wherein growing the immature embryonic culture further comprises transferring the embryonic culture from the maintenance medium to a prematuration medium containing less auxin and less cytokinin than the maintenance medium.
14. (Currently Amended) The method of claim 1, wherein when the nutrient medium is the prematuration medium, and wherein the prematuration medium further comprises abscisic acid.
15. (Canceled)
16. (Currently Amended) The method of claim 1, wherein the additional ~~sugars are~~ sugar is readily metabolized.
17. (Currently Amended) The method of claim 16, wherein the additional ~~sugars are~~ sugar is selected from the group consisting of sucrose, glucose, and fructose.
18. (Currently Amended) The method of claim 1, wherein the lactose is more than 1.0 wt. % of the nutrient medium.
19. (Currently Amended) The method of claim 1, wherein the immature embryogenic culture contains early stage embryos.
20. (Currently Amended) The method of claim 1, wherein the lactose is less than 2.0 wt. % of the nutrient medium.
21. (Currently Amended) The method of claim 1, wherein the lactose is between 1.0 wt. % and 6.0 wt. % of the nutrient medium.
22. The method of claim 1, wherein the nutrient medium further comprises an auxin and a cytokinin.
- 23.-42. (Canceled)
43. (Currently Amended) A method for reproducing conifers by somatic embryogenesis which comprises:

_____growing *Pinus taeda* conifer cells on a nutrient medium comprising lactose, an additional sugar, an auxin, and a cytokinin to produce an immature embryogenic culture; and

_____transferring the immature embryogenic culture to maturation medium to obtain mature embryos capable of germination and reproduction of conifers, and wherein the maturation medium does not contain auxin or cytokinin.

44-49. (Canceled)

50. (Currently Amended) A method for reproducing coniferous somatic embryos by somatic embryogenesis comprising:

_____growing on a nutrient medium an immature embryogenic culture derived from an explant, ~~the on a nutrient medium selected from the group consisting of induction medium, maintenance medium and prematuration medium, wherein and~~ the nutrient medium comprises comprising lactose,

_____wherein the coniferous somatic embryos are *Pinus taeda* somatic embryos or hybrids thereof, and

_____wherein when the nutrient medium is the induction medium, growing the immature embryonic culture comprises inducing ~~is used to induce~~ an explant to form an embryogenic tissue,

_____wherein when the nutrient medium is the maintenance medium, growing the immature embryonic culture comprises growing and maintaining ~~is used to grow and maintain~~ the embryogenic culture, and

_____wherein when the nutrient medium is the prematuration medium, growing the immature embryonic culture further comprises transferring ~~is used to prepare the embryogenic culture for transfer from the prematuration medium~~ to maturation medium and for subsequent development of mature embryos capable of germination, ~~wherein the somatic embryos are *Pinus taeda* somatic embryos or hybrids thereof and~~ wherein the maturation medium does not contain containing auxin or cytokinin.

51. (Canceled)

52. (Currently Amended) The method of claim 50, wherein the lactose comprises 1 wt. % or more of the nutrient medium.

53. (Currently Amended) The method of claim 50, wherein the lactose is between 1 wt. % and 6 wt. % of the nutrient medium.

54. (Currently Amended) The method of claim 50, wherein the lactose is less than 6 wt. % of the nutrient medium.

55. (Currently Amended) A method for reproducing somatic embryos by somatic embryogenesis comprising

_____ growing on a nutrient medium an immature embryogenic culture derived from an explant, ~~the on a nutrient medium selected from the group consisting of maintenance medium and prematuration medium; wherein and~~ the nutrient medium comprises comprising a galactose-containing sugar and an additional sugar;

_____ wherein the coniferous somatic embryo is selected from the group consisting of *Pinus taeda* or hybrids thereof, *Pinus radiata* or hybrids thereof and *Pseudotsuga menziesii* or hybrids thereof, and

_____ wherein when the nutrient medium is the maintenance medium growing the immature embryonic culture comprises growing and maintaining is used to grow and maintain the embryogenic culture and

_____ wherein when the nutrient medium is the prematuration medium, growing the immature embryonic culture further comprises transferring is used to prepare the embryogenic culture for transfer from the prematuration medium to maturation medium and for subsequent development of mature embryos capable of germination; ~~wherein the coniferous somatic embryo is selected from the group consisting of *Pinus taeda* or hybrids thereof, *Pinus radiata* or hybrids thereof and *Pseudotsuga menziesii* or hybrids thereof; and wherein the maturation medium does not contain~~ containing auxin or cytokinin.

56. (Previously Presented) The method of claim 55, wherein the coniferous somatic embryo is *Pinus radiata* or a hybrid thereof.

57. (Previously Presented) The method of claim 55, wherein the coniferous somatic embryo is *Pseudotsuga menziesii* or a hybrid thereof.
58. (Currently Amended) The method of claim 55, wherein the galactose-containing sugar comprises 1 wt. % or more of the nutrient medium.
59. (Currently Amended) The method of claim 55, wherein the galactose-containing sugar is between 1 wt. % and 6 wt. % of the nutrient medium.
60. (Currently Amended) The method of claim 55, wherein the galactose-containing sugar is less than 6 wt. % of the nutrient medium.
61. (Previously Presented) The method of claim 55, wherein the galactose-containing sugar is galactose.
62. (Previously Presented) The method of claim 61, wherein the somatic embryo is *Pinus radiata* or a hybrid thereof.
63. (Previously Presented) The method of claim 61, wherein the somatic embryo is *Pseudotsuga menziesii* or a hybrid thereof.
64. (New) A method for reproducing conifers by somatic embryogenesis which comprises:

growing *Pinus taeda* conifer cells on a nutrient medium comprising lactose, an additional sugar, an auxin, and a cytokinin to produce an immature embryogenic culture; and

transferring the immature embryogenic culture to maturation medium to obtain mature embryos capable of germination and reproduction of conifers, wherein the maturation medium is substantially free of auxin.
65. (New) The method of claim 64, wherein the maturation medium is substantially free of cytokinin.